

NUTRIENT MANAGEMENT (CSP Enhancements)

March 2005

Enhancement Activity Task Sheet

UT-MZ-CSP-ENM



Enhancement Activities

Enhancement activities are actions that provide resource benefits beyond the level prescribed by NRCS Conservation Practice Standards. Once implemented, Enhancement Activities result in an observable or measurable improvement to the condition of one or more of the soil, water, air, plant, or animal resources, or provide for more efficient resource utilization and/or energy conservation.

Enhancement Activity Benefits

Enhancement activities associated with Nutrient Management such as including alfalfa in a dry land rotation, using split applications of nitrogen, or managing filter strips can result in the following benefits to the producer and the environment:

- Improved soil health
- Cleaner ground and surface water

- Fewer complaints about odors
- Improved yields over more acres
- Less reliance on commercial fertilizer
- Reduced costs

CSP Payments

You can earn payments by participating in any of the following activities:

Increase accuracy of nutrient application or forage balance by collecting accurate yield and/or quality data (Cropland & pastureland only).

- Improve precision of nutrient applications by performing additional soil testing beyond that required by the standard.
- Improve nutrient cycling by including alfalfa in a dry land rotation.
- Reduce nitrogen volatilization, nitrate leaching and better match crop uptake by using split nitrogen or controlled-release nitrogen applications.
- Manage runoff of pollutants by widening and managing field borders or filter strips.

CSP Enhancement earnings are subject to payment caps. Your actual payment will depend on your CSP Tier level and the number of acres enrolled.



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Client's Acknowledgement Statement:

I have elected to use the following Nutrient Management activities and understand the requirements of the selected activities (Check all that apply):

- Increase accuracy of nutrient application or forage balance by collecting accurate yield and/or quality data. (Cropland & pastureland only) (Worksheet 7)
- Improve precision of nutrient applications by performing additional soil testing beyond that required by the standard. (Worksheet 8)
- Improve nutrient cycling by including alfalfa in a dry land rotation. (Worksheet 9)
- Reduce nitrogen volatilization, nitrate leaching, and better match crop uptake by using split nitrogen or controlled-release nitrogen applications. (Worksheet 10)
- Manage runoff of pollutants by widening and managing filter strips. (Worksheet 11)

I agree that the following information will be provided to NRCS upon request:

- Written documentation of the activity performed (use attached worksheets or equivalent).
- Copies of dated weigh slips or receipts for equipment or services purchased.

I understand that CSP Enhancements earnings are subject to payment caps and that my actual payments will depend on my CSP Tier level and the number of acres enrolled.

I understand that it is my responsibility to obtain all necessary permits and to comply with all ordinances and laws pertaining to the application of these activities.

Accepted by: /s/ _____ Date: _____

USDA Nondiscrimination Statement

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Name: _____

Worksheet 1- Increase accuracy of nutrient application or forage balance by collecting accurate yield and/or quality data (Cropland & pastureland only)

Payment = \$ 500/Year for collection of accurate yields and/or quality data on cropland, hayland, and pasture.

- Accurate yield data helps managers understand the effects of fertilizers, irrigation water management, tillage, and other cultural practices. It also helps in making decisions that improve operation efficiency and meet production goals while protecting the environment.
- Weigh slips from commercial scales or representative field sample weights using hand scales and measurement of volumes or counts will be used to determine yield data.
- Records must show yields, bushel weights and/or grain grades for small grains.
- Forages will be analyzed using Near Infrared Reflectance Spectroscopy (NIRS) to determine crude protein, acid detergent fiber, and relative feed value for hay. Crude protein, acid detergent fiber and net energy gain information will be determined for silages.
- Pastures will be clipped prior to grazing using a pre-measured plot size to estimate yields. Grazing management records must show the clipping information as well grazing dates, stocking rates, and grazing stubble heights.

Use this table to document crops grown, yield, forage quality, and fertilizer use.

Tract & Field #s or Name	Acres	Crop Grown	Yield (bu/ac or tons/ac)	Bushel weight, RFV, or lbs/ac	Fertilizer Application
<i>Example</i> T123 Field 3	80	Winter Wheat	85	61 lbs/bu	125 lbs N/A
North 40	50	Alfalfa hay	6	18% CP, 152 RFV	100 lbs P/A, 50 lbs K/A
River pasture	20	Grass / Legume	4	4000 lbs/ac attached grazing records	Manure 20 T/A

Accurate Yield and/or Quality Data Certification

I certify that I collected accurate yield and/or quality data on the field(s) and acres listed above.

Name: _____ Date: _____



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Worksheet 2 – Improve precision of nutrient applications by performing additional soil testing beyond that required by the standard

Payment = \$1/Acre for additional soil testing beyond that required by the 590 standard to improve accuracy of nutrient application to avoid under or excess application of nutrients

- Soil test fields not tested within the last 5 years where nutrients have not been applied.
- Take soil tests once every 3 years on perennial crops (test for phosphorus & potassium as a minimum) or yearly on annual crops (test for nitrogen, phosphorus & potassium).
- Take 2-4 foot deep samples for improved nitrogen information.
- Take soil tests to determine micronutrient levels.
- Use Utah State University soil testing procedures as found in the Utah Fertilizer Guide or Colorado State University guidelines
- Use a soil testing lab that meets the requirements of the North American Proficiency Testing-Performance Assessment Program (NAPT-PAP). The list of NAPT-PAP labs can be found at the following website: <http://www.NAPT-PAP.org>
- Attach soil test and recommendations for the fields listed below.

Use this table to document additional soil tests.

Tract & Field # or Name	Acres	Crop Grown	Purpose of Test
T123, Field 3	80	Winter Wheat	2 foot N Sample

Additional Soil Testing Certification

I certify that I have taken additional soil tests on the field(s) listed above.

Name: _____ Date: _____



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Worksheet 3 – Improve nutrient cycling by including alfalfa in a dryland rotation

Payment = \$5/Acre each year that alfalfa or other perennial legume is grown during the dryland rotation.

- Alfalfa in dryland rotations reduces erosion and improves soil condition.
- Alfalfa fixes nitrogen for its own use and increases organic nitrogen in the soil for use by succeeding annual crops.
- A crop rotation that has a legume has more habitat diversity and more cover for wildlife.
- Properly harvested dryland alfalfa hay is a high value feed for livestock.

Use this table to document fields where alfalfa or other perennial legumes are grown. Attach picture or documentation of the yield or sale of the alfalfa or other legume.

	Tract & Field # or Name	Crop Grown	Acres	Year
Example	Poverty Flat	Alfalfa	260	2005

Alfalfa or other Legume in Dryland Rotation Certification

I certify that the field(s) listed above were in alfalfa or other perennial legumes.

Name: _____ Date: _____



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Worksheet 4 - Reduce nitrogen volatilization, nitrate leaching, and better match crop uptake by using split nitrogen or controlled-release nitrogen applications.

Payment = \$5/Acre on acreage where split applications or controlled-release nitrogen (e.g., fall and spring in winter wheat production) are used

- Split application is the process of matching nitrogen supply with crop uptake during the growth periods. Initial nutrients will be 50% or less of the total projected needs with the remainder applied during at least one other growth period and based on soil and/or plant tissue testing (e.g. fall or spring preplant, side dressing or foliar application with pesticides or fertigation).
- Nitrification inhibitors: (N-Serve) or dicyandiamide inhibits organisms involved in the conversion of ammonium to nitrate.
- Urease inhibitors: Agrotain (NBPT) inhibits the urease enzyme that converts urea to ammonia.
- Polymer-coated Fertilizers, Sulfur-coated urea, etc.

Use this table to document split applications or controlled-release applications.

Tract & Field #s or Names	Acres	Crop	Amount and Date of 1 st application	Amount and Date of 2 nd application
Example T486 – 1	120	Winter Wheat	40 lbs N – 9/5	100 lbs N - 4/1
East 160	160	Winter Wheat	N-Serve, 4 /1	

Split Application/Controlled Release-Nitrogen Certification

I certify that I have used split applications of nitrogen or nitrification inhibitors on the field(s) listed in the table above.

Name: _____ Date: _____



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Worksheet 5 – Manage runoff of pollutants by widening and managing field borders or filter strips.

Payment = \$75/Acre for each acre of field border or filter strip widened and managed

- Borders or filter strips act as a buffer to intercept contaminants thereby enhancing water quality. They filter out sediment, organic material, fertilizer, pesticides, and other pollutants that may adversely impact water sources, including shallow ground water.
- Seeding rates, selection of species and methods of planting the buffer must be consistent with information contained in the Intermountain Planting Guide.
- Filter strip vegetation may be a small grain or other suitable annual as long as plant spacing does not exceed 4 inches. Establish early enough prior to the irrigation season so that the vegetation can withstand sediment deposition from the first irrigation.
- The strip or border should be left un-harvested during water flow periods. Grazing or harvesting outside of this time is permitted if appropriate stubble heights are left and soil moisture condition support livestock or vehicle traffic.
- Minimum strip widths:

Slope	Minimum Width
1-3 %	30 feet
4-7 %	40 feet
8-10 %	50 feet

Use photos or conservation plan map and this table to document border or filter strip location and management.

Tract & Field # or Name	Acres of Vegetation	Slope & Width of Border/Strip	Plant Material Used and Management
T1114 -2	.75	1% - 30 feet	Tall Fescue & Orchardgrass Mix, Grazed 8/15-9/1

Filter Strip or Border Widening and Maintenance Certification

I certify that I have managed runoff of pollutants by widening and managing field borders or filter strips on the field(s) listed in the table above.

Name: _____ Date: _____